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NATIONAL STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

GB 1886.189-2016

National Food Safety Standard - Food Additives - 3 - cyclohexyl - propionic acid allyl ester

食品安全国家标准 食品添加剂 3-环己基丙酸烯丙酯

(English Translation)

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1 Scope

This standard applies to cyclohexyl propionic acid or methyl cinnamate and allyl alcohol as raw materials by chemical reaction of the food additive 3-cyclohex Allyl propionate.

2.1 Chemical name

Allyl 3-cyclohexylpropionate

2.2 Molecular formula

C12H20O2

2.4 Relative molecular mass

196.29 (according to 2007 International Relative Atomic Quality)

3.1 Sensory requirements

Sensory requirements shall comply with the requirements of Table 1.

Table 1 sensory requirements

The project requires a test method Color and colorless State liquid the sample was placed in a colorimetric tube and visually observed Aroma Pineapple - like aroma GB/T 14454.2

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3.2 Physical and chemical indicators

Physical and chemical indicators should be consistent with the provisions of Table 2.

Table 2 Physical and chemical indicators

Item Index Test Method Solubility (25 ° C) 1 mL The sample is fully dissolved in 4 mL of 80% by volume ethanol. GB/T 14455.3 3-Cyclohexylpropionic acid allyl ester content, w /% >= 98.0 Appendix A Acid value (in KOH)/(mg/g) <= 5.0 GB/T 14455.5 Refractive index (20 ° C) 1.457 ~ 1.462 GB/T 14454.4 Relative density (25 °C/25 °C) 0.945 ~ 0.950 GB/T 11540 Allyl alcohol, w /% <= 0.1 Appendix A Appendix A Determination of allyl 3 - cyclohexyl propionate and determination of allyl alcohol A.1 Instruments and equipment A.1.1 chromatograph. according to GB/T 11538-2006 in Chapter 5 of the provisions.

A.1.2 Column. Capillary column.

A.1.3 Detector. Hydrogen flame ionization detector.

A.2 Determination method Area normalization method. according to GB/T 11538-2006 10.4 determination of content.

A.3 repeatability and result representation According to GB/T 11538-2006 11.4 provisions, should meet the requirements.

Food additives 3-cyclohexylpropionic acid allyl ester gas chromatograms and operating conditions see Appendix B.

Appendix B

Food Additives - Gas Chromatography and Operating Conditions for Allyl 3 - Cyclohexyl Propionate (Area normalization method) B.1 Food additive 3-cyclohexylpropionic acid allyl ester Gas chromatogram Food additive 3-cyclohexylpropionic acid allyl ester gas chromatogram shown in Figure B.1.

Description.

1 --- allyl alcohol;

2 --- 3-Cyclohexylpropionic acid allyl ester.

Figure B.1 Food additive 3-cyclohexylpropionic acid allyl ester gas chromatogram

B.2 Operating conditions B.2.1 Column. capillary column, length 30m, inner diameter 0.32mm.

B.2.2 Stationary phase. (5% phenyl) -methylpolysiloxane.

B.2.3 Film thickness. 0.25 μm.

B.2.4 Chromatographic furnace temperature..200 °C constant temperature.

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B.2.5 Inlet temperature..200 ° C.

B.2.6 Detector temperature. 250 ° C.

B.2.7 Detector. Hydrogen flame ionization detector.

B.2.8 Carrier gas. nitrogen.

B.2.9 Pre-column pressure. 50 kPa.

B.2.10 Injection volume. 0.2 μL.

B.2.11 Split ratio. 75. 1.

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